Chapter 1 : The Digital Musician: 3rd Edition (Paperback) - Routledge

Digital Musicians Entertainment - Hudson Valley Entertainment providers for parties, weddings, batmitzvah and barmitzvah. So much more that pressing play.

Nowadays, with the decrease of physical sales and increase of digital revenues, almost all distributors that focused on physical products now also offer digital distribution. Digital music distributors have to supply music to a broad variety of online stores and services. From iTunes to Spotify to Beatport. All of these different stores prefer dealing with distributors for their content delivery, but also have differing submission requirements. The tracks, formatting, editing and sales pitch that goes with a submission to iTunes is not the same as it is for Spotify. Having to go through this process by hand is hugely time consuming, which is why many of these distributors have developed software systems to automate this process. There is no physical inventory to store, no actual shipments to be made and no copies to be pressed. Instead, their process boils down to receiving tons of music, delivering to online stores, receiving the revenue generated through sales or streams, issuing financial statements to the submitter and paying them out. This means that aggregators can service a big amount of customers, whilst having few employees and little recurring costs. The biggest costs they do make are fees they pay on submissions to the stores, and on employee hours. This also implies that time spent by employees talking to customers is possibly the biggest cost they have, and often minimized. The distributor makes money through either taking a flat fee from the artist for submitted content, or by taking a percentage of royalties on sales. Some distributors will also ask for an annual upkeep cost to keep the content available on the stores. But, the distributor does make costs. This is why many of them charge an upfront fee, to cover the damages inflicted by handling the submitted content. Out of all the online stores and services, iTunes, Amazon MP3, Spotify, Pandora and Rhapsody contribute the most to the digital music sales market share. Dance music is a slightly different case, as Beatport and JunoDownload are the unequivocal kings there, with Beatport leading by miles. Also, the streaming services Deezer and Rdio seem to be making big waves in the scene, and more and more people are using Shazam and SoundHound on their smartphones to identify tracks. Essentially, everyone should have their content out on iTunes, Amazon MP3 and Spotify check out our guide on optimizing your Spotify presence. Those are the places that you NEED to be. Having your content out on the other aforementioned digital channels is a good bonus, just not a necessity. Some of the more specialized stores do not accept all the music that is submitted to them. Many different stores handle different submission periods. Beatport might work with two weeks, and iTunes with three. But when submitting content to such a large amount of stores, the aggregators have to streamline this. This is why many of them handle a submission period of longer than four weeks from the desired date of release. Take note that the closer a distributor is to the digital store or service, the shorter their submission times will be. When partnering with a distributor, you have to sign a legal agreement. After all, they need to be granted the right to sell and distribute your music to the stores, and to collect the generated revenues. They do not allow for negotiation of specific clauses, and you either sign the agreement if you wish to work with them, or you have to move on. Only when working with smaller and more specialized distributors will you have the freedom to negotiate a contract, but you are unlikely to qualify for a partnership with these parties unless you are offering a huge catalog or are a label. Secondly, take note of the termination clauses and terms of the agreement. As an independent musician, you might be dreaming of scoring that big deal with that record label right? Typically, the bigger and more commercial aggregators will offer you such a deal. In contrast, the smaller and more personalized distributors will try to tie you down for a fixed period cycles of years , as they tend to invest more resources into your long term growth. Recently, this has again come up in relation to one of the biggest aggregators. When a record is played on digital radio, or even streamed on a service such as Spotify, revenue is generated through airtime and plays. Now, these royalties are collected by agencies such as SoundExchange, which allow artists to sign up, label and submit content, and collect money, for free. Now, you can easily collect these digital performance royalties yourself, and do not need a distribution agency to do this for you. Just make sure that your legal agreement with your distributor does not give them the right to collect these royalties, nor anything

related to synchronization rights. What these codes do, is that they allow for easy and internationally standardized means of administering and communicating about your product and music. It helps track store sales, distribution numbers, and even radio airplay. They are also used by royalty collection societies to identify revenue generated by tracks, to its owners. Once you have that, you can issue loads of UPCs. Go to GS1 for more information http: Go here for more information http: If you end up having to pay up often, it could be interesting at getting codes of your own. Choosing the right payment deal: Earlier, we discussed the business models of these distributors. In practice, these come down to flat fees, royalty cuts or a combination of the two. In practice, much of the success of a record can be contributed to the marketing efforts that were put in for it. These marketing efforts extend to the digital stores. When a release has a huge marketing campaign and a good press story, a good distributor will go to the digital store with a sales pitch, asking for a feature placement in the store. The only distributors that would put in such an effort though, are the ones that have incentives to create success for their clients. These are the guys that take a percentage cut of your royalties. After all, when you earn more, they earn more. In contrast, the distributors that take a flat fee and a possible annual subscription fee, do not have this incentive. They generally make the most money from you on the exact moment you sign up, submit and pay. There is a huge number of aggregators out there. But, there is a crucial difference between the most of them. This difference is in the type of clients they accept. Some are focused on serving many clients, other are more specialized and small. Bulk aggregators serve primarily individual artists, and sometimes labels. Case specific marketing is not to be expected from them. In exchange, they are able to offer the best prices on the market, mostly charging flat and annual fees. Specialist aggregators serve primarily independent labels, and powerful independent artists. They do a lot of pre-selection on their clients and attempt to work solely with people they think have potential, or a good marketing story. One-to-one customer assistance is essential in their added value and the good ones are actively involved in marketing releases to the stores. In exchange, they often charge percentage fees. Selecting the right one Whether you go with a big distributor, or a small one, they are unlikely to put in extra hours for you. This holds more true for the prior than the latter. Their biggest revenue comes from serving as many people as possible. Attracting more customers is. The small guys however, are your best bet. They be picky about whom they work with, and you need great content and a good marketing story, a big fanbase, or a huge back-catalog to be interesting for them. Of course, they do charge you for this. I think percentage deals are better than flat fee deals, but only when made with small and specialized aggregators. For starting artists, or labels, getting such a deal can be unattainable. If your stuff picks up, and you still want to stay indie, find yourself a specialized aggregator that wants to run for the money. Until then, take the simple route, and expect little more than just seeing your stuff appear in the stores you want it in. What works best for you is dependent upon your scenario and wishes, and will probably change over time. If you wish to look at more aggregators, you should check out the partner lists of iTunes and Spotify: Pick what is best for your situation. And if you can, find the ones willing to run for the money. This will give you an indication of how good their customer service is, and hopefully get you a specific person whom you can ask all your questions and establish a relationship with. These three companies are my selection of whom I think are the best bulk aggregators worth considering. In return though, they are cheap, and allow you to retain a good chunk of your royalties. My preference goes out to Songflow, as this is a subsidiary of the much renowned specialist distributor FUGA. Also, they allow individual artists to distribute to Beatport without being on a label. Afterwards, payments are issued weekly. I have split these up into two groups, one being for band music and one for electronic music. As you know by now, these parties tend to only work with record labels or artists with an impressive catalog or fanbase. They also enforce a quality filter on their content, so you will have to start a dialogue with them to see if a partnership is possible. This has an advantage though, as your agreement with them can be negotiated. The stronger your fanbase and content, the stronger your position to do so.

Chapter 2 : The Digital Musician

Digitalmusician is offline. Dear visitor, Our service has been closed down on June 30, Best regards The DM Team.

You understand that these calls may be generated using an automated technology. How Technology Transforms the Music Industry There is no denying that technology continues to significantly influence the music industry these days. People have grown comfortable integrating modern technology into their daily lives and the ways they listen to music are not immune to these advancements. It used to be that music was only seen live â€" hence the visual and audio aspects. Now, music lovers are often left with just what they hear. And while this has spurred some of the best audio and sound engineering schools in the country to burst with students excited about the technological changes in this evolving industry, many musicians are left worrying that technology will essentially replace them. However, as we take a deeper look at how technology has intertwined into the music industry, you will see that while some things are still working themselves out, the truth is that digital technology is actually being hailed as the savior of the music industry, rather than the destroyer. Format, mediums, performance, and distribution of music has forced those in the music industry to follow this rising trend and either adapt or die out. These new developments in how audio is manipulated are not the only ones the music industry has seen. In fact, the changes that come with digital technology reach far beyond audio recording. Audio production has evolved, independent artists not bound to major record labels are on a more level playing field, and even the way the consumer listens to and purchases music have changed with the times. A Trying Time When digital downloading hit the market the music industry went into a virtual tailspin. As record sales plummeted due to easily accessible pirated music provided thanks to online music services such as Napster , no one knew what to do. At first glance, it seemed as though technology was dismantling the music industry and there was seemingly no recovery in sight. Consumers were getting what they wanted without spending their hard-earned money. And to top it off, they could customize what they downloaded, getting only the music they wanted, as opposed to having to purchase an entire album for one favorite song title. Major record labels faced a major dilemma. Ordinarily in complete control, they had to either relinquish power to the consumer, who now was in control, or lose everything and fade away. And as any successful business owner will tell you, giving in to what the customer wants is the only way to stay ahead. In fact, as companies such as BMG Rights Management and Kobalt began offering record label services without demanding rights to the music, the major players in the record label industry were forced to rethink their existing business models. As a result, some musicians had become empowered by the advancements in technology and had changed the playing field forever. Lost Money As the music industry gained more control over pirated music and internet streaming became the norm, artists and their record labels made sure everyone knew they were still not happy with the changes technology had encouraged. Everyone wants to be paid for his or her work. And musicians are no different, no matter how much money they make annually. In the end, most musicians gave in to the fact that online streaming technology is what the future entails, and though more difficult than the old-fashioned way, there is still plenty of money to be made by streaming their music. That is not to say that those in the music industry are going unprotected, however, and that the consumers have the right to access music for free no matter what. In fact, organizations such as the Featured Artists Coalition FAC have been organized to protect artists in the music industry. Better Fan Connections That being said, technology has not brought heartache to everyone involved. Online streaming services such as Spotify, Pandora, and MixRadio have boomed since the normalcy of smartphones and tablets. Plus, better fan connections have been forged with online streaming. Fans and artists connect, fans and brands connect, and even fans and fans connect. This personalization based on things such as listening preferences, gender, age, and location all play a role in what music is delivered. The great thing is that users can also make their own customizations when it comes to what they hear online. Though custom playlists are recommended to them via complex algorithms, users are not prevented from stepping out of their bubble, connecting with new artists and fans, and developing a new taste in music. This simply adds to the appeal that technology is good for the music industry and satisfies customers now more than ever. Artists still record in traditional

recording studios using real live instruments and backup singers. Audio and sound engineers are still needed to set up, record, and edit the final product to meet the demands of the consumer. The only difference is that computers are enhancing the music to make it sound more like what consumers want these days. Expert audio engineers are taking old pieces of music and making them new. That is probably why digital technology is being hailed a hero to what was a slowly dying industry. Final Thoughts In the end, if music dies as an industry, it will be because the musicians let it. Once people realize that change is inevitable, and that progress is optional, everything will move forward a lot smoother. It is simply evolving and allowing for the creation of music in new and exciting ways. If you are interested in stepping foot into this new and exciting industry of music technology and live in the Baltimore area, contact The Sheffield Institute for the Recording Arts. As one of the top audio and sound engineering schools in the country, Sheffield will have you prepared for the changing music industry in a way that brings nothing but success to you.

Chapter 3 : DigitalDreamDoor Main Music List Page

The Digital Musician, Third Edition is an introductory textbook for creative music technology and electronic music courses. Written to be accessible to students from any musical background, this book examines cultural awareness, artistic identity and musical skills, offering a system-agnostic survey of digital music creation.

A momentous occasion in the evolution of recorded music occurred 20 years ago when a California district court ruled to allow the sale of a curious new portable music player in the face of opposition from the Recording Industry Association of America RIAA. Which MP3 player came first? It also sold more than , units, making it the first commercially successful digital music player. But the "which-was-first" debate is superfluous. The Backstory Diamond Multimedia needed a brilliant idea. Considering its young, PC nerd customer base, the nascent MP3 market seemed to be a ripe one to exploit. Diamond had to act fast. DigitalCast, a startup with 20 employees founded by a young engineer, Jung-ha Hwang. In a hotel room in Seoul, they signed up DigitalCast to work for Diamond. Fortunately, the Korean team recognized the shortcomings of its first MPMan versions and had renders of next-generation designs. Moore worked with Hwang and his team to finalize a hardware design, with Diamond engineers supplying the control and interface software. Intent on making the player a complete out-of-the-box solution, they then arranged for licensing of the MusicMatch ripping and Jukebox music database software, and of one hundred MP3 tracks from mostly unsigned acts. Marketing VP Ken Wirt worked with a branding company to come up with the Rio brand name, package design, and marketing and PR campaigns. The only thing missing: But instead of hip music-industry types, the conference room was filled with stern-looking lawyers. When Comstock tried to tell them about how Diamond had this cool new digital music playing device, the lawyers interrupted. Selling CDs was a healthy, profitable business. On October 16, Judge Aubrey B. Collins issued a temporary restraining order enjoining Diamond from further manufacturing or distributing of the Rio. You could listen to your music how you wanted, when you wanted," Watkins recalled. Everyone at Diamond knew the Rio needed to be paired with a matching legal music store to succeed long-term. But with consumers essentially stealing music via the just-launched Napster and other mushrooming peer-to-peer services, the record labels were in no mood to license their libraries to Diamond or any other digital music player company.

Chapter 4 : 7digital United States | High quality DRM-free MP3 music downloads

The Digital Musician is a textbook for creative music technology and electronic music courses. It provides an overview of sound properties, acoustics, digital music, and sound design as a basis for understanding the compositional possibilities that new music technologies allow.

But more importantly, FM synthesis revolutionized the music industry, and opened up a world of digital sound possibilities. In later years, the technology found its way into the sound cards of nearly every video game console, cell phone, and personal computer. Yet by following his desire to explore new frontiers of audio, Chowning eventually recontextualized the roles of music and sound, found his way back into Stanford, and became the department chair of his own internationally-renowned program. This is the story of an auditory pioneer who was unwilling to compromise his curiosity â€" and who, with a small group of gifted colleagues, convinced the world that computers could play an important role in the creation of music. They were mysterious, magical places. Fully versed in reading sheet music, Chowning was initially enlisted to play the cymbals, but soon graduated to the drums. Navy Jazz band c. Chowning was accepted, and he and his wife moved to France where he joined 40 other gifted students. For the next two years, he met with her once a week for intensive studies. The spatial aspects caught my attention: Instead, the well-versed teacher encouraged him to pursue it. Gradually, he began to resign himself to a more traditional repertoire. Chowning hardly glanced at it before stuffing it in his pocket â€" but two weeks later, he rediscovered it and gave it a read. The voltage went to loudspeaker It made me think back to all those big studios in Europe. A Burroughs B system: When Chowning arrived, Matthews was pleasantly surprised, and took the curious musician under his wing. Each represented a particular waveform â€" sinusoidal, triangular wave, and whatnot. Then, another card would tell computer how to connect these, and modulate frequencies. You could generate thousands and thousands of periods of a sine wave with just a couple of punch cards. As Chowning had experienced in France, most of his college colleagues scoffed at the unfamiliar, foreign concepts of computer music. But before he left, he made Chowning promise him one thing: In the late months of , while Leland Smith was abroad, Chowning had an idea: For the next two years, the rogue musician hit the books. With strong references from his adviser, Leland Smith, and others in the department, he joined the staff as an assistant professor of composition. It was here, late one night in the Autumn of , that Chowning had an unintentional breakthrough: As I increased the vibrato in speed and depth, I realized I was no longer hearing instant pitch and time. The sounds this method produced were entirely foreign: This was a problem: And he had help: More boldly put, it could open up musicians to a new world of sound customization. Like all professors in the music department, he was required to compose regularly, with the expectation that his work would receive peer recognition. He also had teaching duties to maintain, which consumed much of his time. While juggling his responsibilities, he spent the next four years working on FM synthesis, and replicating the sounds of various instruments. In those days, innovative Stanford professors had a choice: Meanwhile, Chowning bunkered down and focused on integrating his discovery into his own music. If you listen closely between the 4: Seven years into his role as an assistant professor, it was time for him to take his sabbatical. At first, this was devastating news for the young academic: I had a young family and I had to figure out how I was going to support them. But I still felt like I had to pursue what I started. It wasnt worth giving up. I was in a digital world, but the whole process was intensely musical. Programming and creating sounds, and figuring out how the two relate â€" all of that was, for me, the point. Chowning jumped at the opportunity, and soon found himself back in Paris, assisting in the development of the program. And as luck would have it, the company gave the patent a chance. With its tail between its legs, Stanford approached Chowning and extended an offer to return, this time as an research associate. Except there was a difference: For years, analog synthesizer instruments had ruled the market. But they came with their fair share of shortcomings or unique quirks, depending on who you talk to. From the s to the early s, electronic instruments were limited by their dependance on magnetic tape as a means of producing and recording sounds. Even newer developments in the mids, like the Moog or the Mellotron, were fickle: Efforts to digitize the synthesizer had been made in previous decades, but were thwarted by the gargantuan

size of computers and memory cards, and the fact that it took up to 30 minutes just to hammer out a few measures of music. This level of commitment is evident in an excerpt from a July letter from Yamaha to Chowning: Yamaha welcoming Chowning to Japan for the first time; Stanford Special Collections Library While Yamaha tinkered with digital synthesizer technology, they made great strides with their analogue synths. In and , the company released two machines â€" the GX1, and the CS80 â€" in limited runs of 10 units. By then, Yamaha was fully invested in the belief that the technology could make them millions of dollars, and they negotiated a licensing agreement with Stanford, securing them rights to the technology for the next 17 years, until One of 17 schematics submitted in the FM Synthesis patent application submitted in , and approved in But during the next several years, the company hit a number of roadblocks in rolling out their digital technology. But the instruments were universally touted as great sounding, which boded well for Yamaha. Though it was mass produced for a wider audience, its sound quality earned it high praise from a number of famous musicians: As per the original licensing agreement, Stanford received. The synthesizer exploded in popularity in a variety of markets the U. S, Japan, Great Britain, and France and continued to bring in substantial profits through its discontinuation in The company, once focused on diversification, now intensely drove its synthesizer production, producing some 1, electronic organs per day. The patent was making more money than ever before â€" and at the height of this second wave, Stanford and Yamaha signed a new royalty agreement: The FM chip, which Yamaha had developed with Chowning, was selling some , pieces per year. Throughout all of this, Chowning remained level-headed, if not disinterested. Smith, and the other for Chris Chafe. Above all else, Chowning loves to learn. You can only do it once, because people get agitated. It sounds like music to me.

Chapter 5 : Digital music and audio | Technology | The Guardian

Digital Musicians is the Professional, Convenient, and Exciting choice for you and your families most important day! There is a difference, and we are honored to have the opportunity to show you why we are the most exciting, trusted, award winning Entertainers in the Hudson Valley!!!

Right from the day Edison invented the phonograph, music and technology have been intimately entwined and huge industries have sprung up around recording, distribution and sales of music. As technology has changed so too has the nature of the music industry but the rise of the internet, file sharing, online distribution platforms and social media have probably led to the biggest changes in the industry. The ease with which people can access music, either legally via iTunes, Spotify and other such platforms, or illegally via file sharing has coincided and perhaps been a prime mover in the drop off in physical music sales, much to the chagrin of those in the industry. But on the flip side the accessibility of digital recording equipment and the ability for artists to distribute their material worldwide without a record deal has opened up new and exciting opportunities for artists. In the afternoon things turned towards the future of social in the music industry with input from Andrew Ko , CEO of Moment. Are we precluding the opportunity for HiFi Music through digital? There will continue to be a space for people to consume music on all levels. There are still vinyl junkies after all. The world has shifted so much now from where it was. The generations of today will hear a track and share it instantly. First there were album covers then music videos. What opportunity does digital offer for an experience beyond the music? We try to provide a broad content basis, you can catalogue, find classical music, read about composers and the music that influenced them to give texture and depth to the experience. One of the most precious things of the past was giving someone a mix tape in an order you found compelling. So we allow them to upload any file format they want, and then if they share the track with a contact then they download the original file. Do you think artwork is still relevant in the digital era and important to artists and labels? In the digital realm it has lost its importance, but I think there will be a resurgence, especially as we see more music being played on devices that also have amazing screens, such as tablets and connected devices like TVs. This turns the sound into a truly social object and we allow listeners to leave timed comments along the waveform. Artists that are still focused on the old ways of doing things could be missing out. If focus has predominantly moved to the consumer space, what happens to the distributor? The label can potentially be the focal point for the culture that backs the music and can have a role in that as a support structure. Unless they can do that and demonstrate added value they could have reason to be worried. Does the digital streaming world deny us Hi-Fi sound quality? To a certain extent yes but two parallel trends tend to exist. Then there is the trend for appreciating low fidelity… such as cassettes coming back? There are people who create music to make money and then there are people who do it for the love of music. Who has benefitted more from the shift to digital? What is the Art of Noise? A seminal ground breaking group of musicians and music technologists that influenced a whole generation of dance music. Do you think that musicians have taken advantage fully of what social and digital allows them to? Is there more to do? The industry as a whole is notoriously slow to adapt to new trends. There are vague discussions about how the Art of Noise might reform. The frustration of having a Christmas song come on in March was the inspiration! What context does this bring to peoples music? Personalisation, relevance and an emotional connection TOA: What does the music industry need to do in order to maximise digital and social opportunities? So the music industry needs to help cultivate an environment where startups can succeed in creating new technologies that will help bring value back to music. The big labels and artists are still needed because they are the ones that work together to help make the music that we all love. Us does is gather unique information to help fill a gap for the industry in the way music is recommended in this digital age. What else needs to change in the music industry? What the industry needs to change is the contextual element. Emotions and experiences always happen within a certain context. The different methods of digital consumption available are great for the consumer, but they do offer challenges to the Industry. Many people will listen to songs, playlists or compilations rather than full albums. However, if the body of work is strong enough, it will cut through. What is the modern equivalent of the album cover?

Digital and social are the modern day billboard for the artist. In the past we had gatefold vinyl and we still have the CD booklet to give you an insight into the artist through images, liner notes and lyrics. We have a challenge to get consumers to buy into more than just a song, hopefully the album and more importantly a long-term relationship with the artist. Is there a place for Hi-Fi in digital music? As an industry we need to cater for a multitude of tastes across the generations:

Chapter 6 : The effect of digital on the music industry | Organic

Update: April Here is a model you can use for html Updates: April 8 Top priority for the class - Excellent final projects!!! (Projects #6) Other priorities and expectations.

Overview[edit] A sound wave, in red, represented digitally, in blue after sampling and 4-bit quantization. Digital audio technologies are used in the recording, manipulation, mass-production, and distribution of sound, including recordings of songs , instrumental pieces, podcasts , sound effects, and other sounds. Modern online music distribution depends on digital recording and data compression. The availability of music as data files, rather than as physical objects, has significantly reduced the costs of distribution. With digital-audio and online distribution systems such as iTunes , companies sell digital sound files to consumers, which the consumer receives over the Internet. An analog audio system converts physical waveforms of sound into electrical representations of those waveforms by use of a transducer , such as a microphone. The sounds are then stored on an analog medium such as magnetic tape , or transmitted through an analog medium such as a telephone line or radio. The process is reversed for reproduction: Analog audio retains its fundamental wave-like characteristics throughout its storage, transformation, duplication, and amplification. Analog audio signals are susceptible to noise and distortion, due to the innate characteristics of electronic circuits and associated devices. Disturbances in a digital system do not result in error unless the disturbance is so large as to result in a symbol being misinterpreted as another symbol or disturb the sequence of symbols. It is therefore generally possible to have an entirely error-free digital audio system in which no noise or distortion is introduced between conversion to digital format, and conversion back to analog. A digital audio signal may optionally be encoded for correction of any errors that might occur in the storage or transmission of the signal. This technique, known as channel coding , is essential for broadcast or recorded digital systems to maintain bit accuracy. Eight-to-fourteen modulation is a channel code used in the audio compact disc CD. Conversion process[edit] The lifecycle of sound from its source, through an ADC, digital processing, a DAC, and finally as sound again. A digital audio system starts with an ADC that converts an analog signal to a digital signal. CD audio , for example, has a sampling rate of Analog signals that have not already been bandlimited must be passed through an anti-aliasing filter before conversion, to prevent the aliasing distortion that is caused by audio signals with frequencies higher than the Nyquist frequency half the sampling rate. A digital audio signal may be stored or transmitted. Digital audio can be stored on a CD, a digital audio player , a hard drive , a USB flash drive , or any other digital data storage device. The digital signal may be altered through digital signal processing , where it may be filtered or have effects applied. Sample-rate conversion including upsampling and downsampling may be used to conform signals that have been encoded with a different sampling rate to a common sampling rate prior to processing. Digital audio can be carried over a network using audio over Ethernet , audio over IP or other streaming media standards and systems. For playback, digital audio must be converted back to an analog signal with a DAC which may use oversampling. History in recording[edit] See also: Digital recording Pulse-code modulation was invented by British scientist Alec Reeves in [2] and was used in telecommunications applications long before its first use in commercial broadcast and recording. The first commercial digital recordings were released in By the early s, it had developed a 2-channel recorder, and in it deployed a digital audio transmission system that linked their broadcast center to their remote transmitters. An improved version of the Soundstream system was used to produce several classical recordings by Telarc in The 3M digital multitrack recorder in development at the time was based on BBC technology. British record label Decca began development of its own 2-track digital audio recorders in and released the first European digital recording in The introduction of the CD popularized digital audio with consumers.

Chapter 7 : The Father of the Digital Synthesizer

Digital music (sometimes referred to as digital audio) is a method of representing sound as numerical calendrierdelascience.coml music is often synonymous with MP3 music since that's a common file format that digital music exists in.

Drum machines[edit] A Yamaha RY30 Drum Machine A drum machine is an electronic musical instrument designed to imitate the sound of drums , cymbals , other percussion instruments , and often basslines. Drum machines are most commonly associated with electronic dance music genres such as house music , but are also used in many other genres. They are also used when session drummers are not available or if the production cannot afford the cost of a professional drummer. In the s, most modern drum machines are sequencers with a sample playback rompler or synthesizer component that specializes in the reproduction of drum timbres. Though features vary from model to model, many modern drum machines can also produce unique sounds, and allow the user to compose unique drum beats and patterns. Electro-mechanical drum machines were first developed in , with the invention of the Chamberlin Rhythmate. Transistorized electronic drum machines later appeared in the s. The most iconic drum machine was the Roland TR , widely used in hip hop and dance music. Sampler musical instrument Digital sampling technology, introduced in the s, has become a staple of music production in the s. Devices that use sampling , record a sound digitally often a musical instrument, such as a piano or flute being played , and replay it when a key or pad on a controller device e. Samplers can alter the sound using various audio effects and audio processing. Sampling has its roots in France with the sound experiments carried out by Musique Concrete practitioners. In the s, when the technology was still in its infancy, digital samplers cost tens of thousands of dollars and they were only used by the top recording studios and musicians. These were out of the price range of most musicians. Before affordable sampling technology was readily available, DJs would use a technique pioneered by Grandmaster Flash to manually repeat certain parts in a song by juggling between two separate turntables. This can be considered as an early precursor of sampling. In turn, this turntablism technique originates from Jamaican dub music in the s, and was introduced to American hip hop in the s. In the s, most professional recording studios use digital technologies. In the s, many samplers exist in the digital-only realm. This new generation of digital samplers are capable of reproducing and manipulating sounds. New genres of music have formed which would be impossible without sampling. Advanced sample libraries have made complete performances of orchestral compositions possible that sound similar to a live performance. MIDI MIDI allows multiple instruments to be played from a single controller often a keyboard, as pictured here , which makes stage setups much more portable. This system fits into a single rack case, but prior to the advent of MIDI. MIDI has been the musical instrument industry standard interface since the s through to the present day. A demonstration at the convention showed two previously incompatible analog synthesizers , the Prophet and Roland Jupiter-6 , communicating with each other, enabling a player to play one keyboard while getting the output from both of them. This was a massive breakthrough in the s, as it allowed synths to be accurately layered in live shows and studio recordings. MIDI enables different electronic instruments and electronic music devices to communicate with each other and with computers. The advent of MIDI spurred a rapid expansion of the sales and production of electronic instruments and music software. This newly founded association standardized the MIDI protocol by generating and disseminating all the documents about it. Since the s, personal computers developed and became the ideal system for utilizing the vast potential of MIDI. With universal MIDI protocols, electronic keyboards, sequencers, and drum machines can all be connected together. Current developments in computer hardware and specialized software continue to expand MIDI applications. Computers in music technology[edit] Computer and synthesizer technology joining together changed the way music is made, and is one of the fastest changing aspects of music technology today. Matthews also pioneered a cornerstone of music technology; analog to digital conversion. The first generation of professional commercially available computer music instruments, or workstations as some companies later called them, were very sophisticated elaborate systems that cost a great deal of money when they first appeared. It was not until the advent of MIDI that

general-purpose computers started to play a role in music production. Advancements in technology have increased the speed of hardware processing and the capacity of memory units. Software developers write new, more powerful programs for sequencing, recording, notating, and mastering music. Such programs allow the user to record acoustic sounds with a microphone , mix tracks record or MIDI musical sequences, which may then be organized along a timeline and edited on a flat-panel display of a computer or Digital Audio Workstation. Musical segments recorded on can be copied and duplicated ad infinitum, without any loss of fidelity or added noise a major contrast from analog recording , in which every copy leads to a loss of fidelity and added noise. Digital music can be edited and processed using a multitude of audio effects. Classical and other notated types of music are frequently written on scorewriter software. Music technology includes many forms of music reproduction. Music and sound technology refer to the use of sound engineering in a commercial, experimental or amateur hobbyist manner. Music technology and sound technology may sometimes be classed as the same thing, but they actually refer to different fields of work. Sound engineering refers primarily to the use of sound technology for sound recording or in sound reinforcement systems used in concerts and live shows.

Chapter 8 : calendrierdelascience.com: Digital Music

In today's music industry, the importance of having your music available This is a comprehensive guide on how to choose the right distribution to push your music through. An in-depth comparison of multiple digital distributors.

Chapter 9 : Music technology (electronic and digital) - Wikipedia

Digital Music News is the top source for music business and technology news. DMN is for people in music!